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2006 – 2007 BOBCAT REGISTRATION REPORT

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Introduction

The Department of Natural Resources (DNR) requires hunters and trappers to present all harvested bobcat (*Felis rufus*) for collection of biological data and sealing of pelts. This provides the DNR with an estimate of bobcat harvest, and biological data for use in assessing the bobcat population. Sealing of the bobcat pelt is required to comply with the Convention on International Trade in Endangered Species (CITES) if the person who harvested the bobcat desires to export the pelt outside of the United States. Information from this report is also forwarded to the United States Fish and Wildlife Service (USFWS) so they can meet their legal obligation under CITES, 1) that export levels of bobcat from the United States will not be detrimental to the survival of the species, and 2) any exported specimens have been legally acquired.

Materials & Methods

Successful furharvesters submitted bobcat skulls, a lower jaw, or an undamaged canine tooth during registration and sealing of a bobcat. Date and location of harvest were recorded. Samples were placed in individual sample bags and marked with an identification number and contact information of the furharvester. They were then shipped to the DNR Wildlife Disease Laboratory for analyses. When a skull or jaw was submitted, a lower canine tooth was extracted after the skull was boiled in water for one hour. We used maximum root width and thickness of the canine tooth to determine sex of each bobcat in the laboratory (Friedrich et al. 1983). Age was estimated by counting cementum annuli in longitudinal cut cross sections of the tooth root (Crowe 1975).



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Results and Discussion

Zone 1

During 2006-2007, we collected 581 tooth samples from a registered harvest of 635 bobcats from Zone 1 (Units A and B, see Figure 1). Hunters registered 122 bobcats, and trappers registered 513 bobcats from Zone 1. The M:F sex ratio of bobcats collected from Zone 1 was 147:100 (Table 1). Of the bobcats collected, 71.4% were less than three years of age. The young-of-the year (30.5%), and one to two year old (27.2%) age classes occurred most frequently in the registered harvest (Table 1).

Zone 2

During 2006-2007, we collected 203 tooth samples from a registered hunter harvest of 215 bobcats from Zone 2 (Units C and D, Figure 1). The M:F sex ratio of bobcats collected from Zone 2 was 131:100 (Table 2). Of the bobcats collected, 70.9% were less than three years of age. The young-of-the year (19.2%), and one to two year old (34.5%) age classes occurred most frequently in the registered harvest (Table 2).

Zones 1 and 2

The number of bobcats registered during the 2006-2007 season (850) was up slightly from the 2005-2006 season (817*). The mandatory submission of bobcat teeth resulted in 784 useable samples for a compliance rate of 92.2% (784/850). The age class and sex ratios from Zones 1 and 2 combined are summarized in Table 3.

Management Implications

Sealing of bobcat pelts and collection of biological data from harvested bobcats assures the DNR's compliance with USFWS regulations under CITES. Multiple year trends in harvest sex and age ratios are used by the DNR in conjunction with other indices to evaluate the population status of bobcat in Michigan.

Acknowledgments

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***Eight additional registrations from the 2005-06 season were received after the Bobcat Survey 2005-2006 Wildlife Division Report No. 3465 reported a total harvest of 809 (607 in Zone 1).**

Literature Cited

- Crowe, D.M. 1975. Aspects of aging, growth, and reproduction of bobcats from Wyoming. J. Mamm. 56:117-198.
- Friedrich, P.D., G.E. Burgoyne Jr., T.M. Cooley, and S.M. Schmitt. 1983. Use of lower canine teeth for determining the sex of bobcats in Michigan. Wildl. Div. Rep. No. 2960. 5pp.

Table 1. Estimated age and sex ratio of Zone 1 bobcats registered from the 2006-2007 season

Age	Number	Male	Female	Percent of Total
0-1	177	91	86	30.5
1-2	158	93	65	27.2
2-3	80	43	37	13.8
3-4	49	34	15	8.4
4-5	28	23	5	4.8
5-6	29	19	10	5.0
6-7	17	9	8	2.9
7-8	13	9	4	2.2
8-9	11	10	1	1.9
9-10	7	5	2	1.2
10-11	3	2	1	0.5
11-12	6	5	1	1.0
12-13	1	1		0.2
13-14	1	1		0.2
15-16	1	1		0.2
Total	581	346	235	100

Table 2. Estimated age and sex ratio of Zone 2 bobcats registered from the 2006-2007 season

Age	Number	Male	Female	Percent of Total
0-1	39	11	28	19.2
1-2	70	43	27	34.5
2-3	35	21	14	17.2
3-4	26	17	9	12.8
4-5	10	9	1	4.9
5-6	6	3	3	3.0
6-7	3	2	1	1.5
7-8	5	4	1	2.5
8-9	6	3	3	3.0
10-11	1	1		0.5
11-12	2	1	1	1.0
Total	203	115	88	100

Table 3. Estimated age and sex ratio of Zone 1 and 2 bobcats combined, registered from the 2006-2007 season

Age	Number	Male	Female	Percent of Total
0-1	216	102	114	27.6
1-2	228	136	92	29.1
2-3	115	64	51	14.7
3-4	75	51	24	9.6
4-5	38	32	6	4.8
5-6	35	22	13	4.5
6-7	20	11	9	2.6
7-8	18	13	5	2.3
8-9	17	13	4	2.2
9-10	7	5	2	0.9
10-11	4	3	1	0.5
11-12	8	6	2	1.0
12-13	1	1		0.1
13-14	1	1		0.1
15-16	1	1		0.1
Total	784	461	323	100

Figure 1. Bobcat Management Units in Michigan, 2006-2007

